Patent Claims:

1. Method for reducing deviations between the effective current (I_{RMS}) and the measured current (I_{meas}) in a pulse-width-modulated current control, in particular for electronic brake control units of motor vehicles,
c h a r a c t e r i z e d in that the measured current (I_{meas}) is determined at a certain predetermined time during an actuation period (t_{PWM}) and a compensation is executed by way of compensation variables in response to temperature and/or supply voltage, which are added to the measured current (I_{meas}) so that a corrected nominal current ($I_{nominal}$) is available for current control.

2. Method as claimed in claim 1,
c h a r a c t e r i z e d in that the supply voltage dependency is compensated.

3. Method as claimed in claim 1 or 2,
c h a r a c t e r i z e d in that the compensation variables are stored in a table, in particular in a data memory.

4. Method as claimed in at least one of the preceding claims,
c h a r a c t e r i z e d in that several loads are driven, and the compensation variables are fixed individually for each load, in particular for each valve coil.

5. Method as claimed in any one of claims 3 or 4,
c h a r a c t e r i z e d in that an interpolation is carried out for temperatures and/or supply voltages lying between two table values in order to determine the optimal compensation variable.

6. Method as claimed in at least one of the preceding claims,
c h a r a c t e r i z e d in that an averaging operation is executed by way of the present nominal value and previous nominal values to compensate abrupt changes in nominal values.

7. Method as claimed in at least one of the preceding claims,
c h a r a c t e r i z e d in that the temperature is determined indirectly by way of the Duty Cycle adjusted by current control.

8. Method as claimed in claim 7,
c h a r a c t e r i z e d in that the sum (R_{AVG}) of the coil resistor (R_L) and the resistor of the connected semiconductor component for driving the load ($R_{DSon-LS}$) is taken into consideration for the determination of temperature.

9. Method as claimed in claim 7 or 8,
c h a r a c t e r i z e d in that the Duty Cycles of several PWM periods (t_{PWM}) are averaged for temperature measurement or the determination of the indirect temperature value.

10. Method as claimed in at least one of claims 7 to 9,
c h a r a c t e r i z e d in that the nominal resistance value of the coil is used at the presently measured or estimated temperature of the control unit for the average value of the indirectly determined temperature quantity (R_{AVG}) directly after the switching on of the ignition, in particular after the ignition's re-start.

11. Circuit arrangement for driving several inductive loads comprising a circuit for the PWM control of the load current,
c h a r a c t e r i z e d in that the method as claimed in at least any one of claims 1 to 10 is implemented as a program in a microcomputer or microcomputer system which is electrically connected to the PWM circuit.

12. Circuit arrangement for driving several inductive loads comprising a circuit for the PWM control of the load current, in particular according to claim 11,
c h a r a c t e r i z e d in that the method as claimed in at least any one of claims 1 to 10 is realized at least in part by digital logic.